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FROM: GARY P. OAKESON

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OUR DOCKET No.: 200315570-1

FOR: PIGMENTED INK-JET INKS WITH IMPROVED PRINT QUALITY AND

RELIABILITY

SUBJECT: REPLY BRIEF

Reply Brief Noted.

Commissioner For Patents PO Box 1450 Alexandria, VA 22313-1450

E.C.

12/7/08

Dear Sir/Madam:

Attached please find a Reply Brief for Docket No. 200315570-1, Application No. 10/807,025.

Thank you. We await your confirmation of receipt.

Respectfully/submitted,

Gary P. Oakeson

THORPE NORTH & WESTERN, LLP

Customer No. 20,551 Reg. No. 44266

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SEP 2 3 2008

HEWLETT-PACKARD COMPANY Intellectual Property Administration P.O. Box 272400 Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO.

200315570-1

IN THE

UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s):

Zia Ur Rehman

Confirmation No.: 2239

Application No.: 10/807,025

Examiner: Edward J. Cain

Filing Date:

03/22/2004

Group Art Unit: 1796

Title: Pigmonted Ink-Jet Inks with Improved Print Quality and Reliability

Mail Stop Appeal Brief - Patents Commissioner For Patents PO Box 1450 Alexandria, VA 22313-1450

#### TRANSMITTAL OF REPLY BRIEF

Transmitted herewith is the Reply Brief with respect to the Examiner's Answer mailed on \_\_\_\_\_07/28/2008

This Reply Brief is being filed pursuant to 37 CFR 1.193(b) within two months of the date of the Examiner's Answer.

(Note: Extensions of time are not allowed under 37 CFR 1.136(a))

(Note: Failure to file a Roply Brief will result in dismissal of the Appeal as to the claims made subject to an expressly stated new ground rejection.)

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Typed Namo:

Respectfully submitted,

Zia Ur Rehonan

Gary P. Oakeson

Attorney/Agent for Applicant(s)

Reg No.:

44,266

Date:

09/23/2008

Telephone: 801-566-6633

Rdv 10/07 (ReplyDit)

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# DUPLICATE

SEP 2 3 2008

HEWLETT-PACKARD COMPANY Intellectual Proporty Administration P.O. Box 272400 Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. \_

200315570-1

IN THE

UNITED STATES PATENT AND TRADEMARK OFFICE

inventor(s);

· Zis Ur Rehman

Confirmation No.: 2239

Application No.: 10/807,026

Examiner: Edward J. Cain

Telephone > 801-566-6633 .

Filing Date: 03/22/2004

Group Art Unit: 1796

Title: Pigmented Ink-Jet Inks with Improved Print Quality and Reliability

Mail Stop Appeal Brief - Patents Commissioner For Patents PO Box 1450 Alexandria, VA 22313-1450

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This Reply Brief is being filed pursuant to 37 CFR 1,193(b) within two	months of the date of the Examiner's Answer.
(Note: Extensions of time are not allowed under 37 CFR 1.1	36(a))
<ul> <li>(Note: Failure to file a Reply Brief will result in dismissal of the stated new ground rejection.)</li> </ul>	he Appeal as to the claims made subject to an expre
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If any fees are required please charge Deposit Account 08-2025.	
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I hereby contify that this paper is being transmitted to the Patent and Trademark Office.	Gary P. Oakeson Attomey/Agent for Applicant(s)
facsimile number (571) 273-8300. Date of facsimile 09/23/2008	Reg No. : 44,266
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#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPELLANT: Zia Ur Rehman CERTIFICATE OF **DEPOSIT UNDER 37 C.F.R.** SERIAL NO.: 10/807,025 § 1.8 I hereby certify that this FILING DATE: 3/22/2004 correspondence is being transmitted via facsimile to the USPTO or being CONF. NO.: 2239 deposited with the United States Postal Service with sufficient postage FOR: PIGMENTED INK-JET INKS as first class postage in an envelope addressed to Commissioner for WITH IMPROVED PRINT Patents, P.O. Box 1450, Alexandria, QUALITY AND VA 22313-1450 on the date indicated RELIABILITY below. ART UNIT: 1796 09/23/2008 Date of Deposit EXAMINER: Edward J. Cain Brinds Wisseman Brenda Wiseman DOCKET NO.: 200315570-1

#### APPELLANTS' REPLY BRIEF UNDER 37 C.F.R. § 41.41

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 Mail Stop Appeal Brief -- Patents

Sir:

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Appellants submit this Reply Brief in response to the Examiner's Answer, mailed on July 28, 2008, in connection with their Appeal Brief, filed on May 12, 2008, which

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was filed in response to the final rejection of the Patent Office, mailed January 15, 2008, in the above-identified application.

#### STATUS OF CLAIMS

Claims 1-6, 8-9, 11-19, 21-26, and 28-29 remain pending and have been rejected. Claims 7, 10, 20, 27, and 30 have been canceled. The claims on appeal in this application are claims 1-6, 8-9, 11-19, 21-26, and 28-29.

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#### GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues presented for review are:

- a. whether claims 21-26 and 28-29 are unpatentable under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2005/0027035 (hereinafter "Wang") in view of evidence given in U.S. Patent No. 5,571,311 (hereinafter "Belmont");
- b. whether claims 1-3, 6, 8, 11-13, and 16-18 are unpatentable under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,214,100 (hereinafter "Parazak") in view of U.S. Patent No. 5,889,083 (hereinafter "Zhu") and U.S. Patent No. 6,874,881 (hereinafter "Suzuki");
- c. whether claims 4-5 and 14-15 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Parazak in view of Zhu and Suzuki, and further in view of U.S. Patent No. 6,280,513 (hereinafter "Osumi");
- d. whether claims 9 and 19 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Parazak in view of Zhu and Suzuki, and further in view of U.S. Patent
   Publication No. 2002/0198287 (hereinafter "Ohta");
- whether claims 21-23, 26, and 28 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Parazak in view of Zhu;
- f. whether claims 24-25 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Parazak in view of Zhu, and further in view Osumi;
- g., whether claim 29 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Parazak in view of Zhu, and further in view of Ohta;

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- h. whether claims 1-3, 6, 8, 11-13, and 16-17 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Parazak in view of Zhu, and U.S. Patent No. 6,652,055 (hereinafter "Oikawa");
- i. whether claims 4-5 and 14-15 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Parazak in view of Zhu and Oikawa and further in view of Osumi; and
- j. whether claims 9 and 19 are unpatentable under 35 U.S.C. § 103(a) as being obvious Parazak in view of Zhu and Oikawa, and further in view of Ohta.

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#### **ARGUMENT**

#### A. Examiner's Answer

The following numbered paragraphs summarize the Examiner's 102 and 103 rejections and the Examiner's response to the Appellants' arguments regarding those rejections. Appellants have only addressed those rejections where Appellants' previous arguments have been responded to by the Examiner. As such, for those rejections that the Examiner has not further elaborated, Appellants direct the Board to Appellants' brief for a detailed review.

The following sections B and C address those arguments that have been presented by the Examiner in response to the Appellants' arguments in the Appeal Brief. The Appellants refer the Board of Appeals to the Appeal Brief for a more complete summary of Appellants' positions, as supplemented by the present Reply Brief.

- 1. In rejecting claims 21-26 and 28-29 under 102(c) by Wang, the Examiner alleges that Wang discloses the present ink compositions. However, the Examiner also acknowledges that Wang does not teach the present self-dispersing pigments but states that Wang "points to Belmont et al." The Examiner then alleges that Belmont teaches the present self-dispersing pigments.
- 2. In response to Appellants' arguments that Wang does not incorporate Belmont by reference, and therefore, the present rejection cannot properly serve as a 102 rejection, the Examiner contends that Wang need not incorporate Belmont by reference. Additionally, in response to Appellants' arguments that Wang does not teach ink jettable compositions at frequencies of 3-25kHz, the Examiner maintains the assertion that such a cliaracteristic would be inherent to the composition.

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- 3. In rejecting claims 1-3, 6, 8, 11-13, and 16-18 under 103 (a) over Parazak in view of Zhu and Suzuki, the Examiner alleges that Parazak teaches the present ink composition absent the styrene-maleic anhydride, and a printhead configured for a specific firing frequency. The Examiner then attempts to cure the deficiencies by citing Zhu for the styrene-maleic anhydride and Suzuki for the printhead.
- 4. In response to Appellants' argument that Zhu teaches away from the use of organic solvents, the Examiner alleges that as Parazak teaches organic solvents 0.1 to 20 wt% and Zhu teaches organic solvent in amounts below 20%, the references can be properly combined. In response to Appellants' arguments that Suzuki does not provide printheads having the claimed firing frequency, the Examiner alleges that Suzuki teaches a firing frequency of 15 kHz and that such frequency is in Appellants' claimed range.
  - 5. In response to Appellants' inherency arguments, the Examiner notes that Appellants have not present rebuttal evidence. The Examiner does not claborate on any other arguments presented in Appellants' Appeal Brief.
- B. Rejection of Claims 21-26 and 28-29 over Wang in view of evidence in Belmont
  The Examiner has rejected claims 21-26 and 28-29 under § 102(c) as being
  anticipated Wang in view of evidence in Belmont. However, Appellants contend that the
  present references do not teach each and every element of these claims.

As previously argued, Wang discloses the use of styrene-malcic anhydride to control black-to-color bleed in ink-jet ink. However, the Examiner is attempting to reject the aforementioned claims by Wang under a 102 standard even though Wang does not leach each and every element of the independent claim 21. Specifically, Wang does not

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teach an acid-functionalized pigment or being reliably jettable at all firing frequencies ranging from 3 kHz to 25 kHz.

Appellants note that the Examiner maintains that Wang explicitly discloses "self-dispersed pigments." However, the present claims require an acid-functionalized pigment. Even so, Appellants contend that neither Wang nor Belmont disclose acid-functionalized pigments as presently claimed.

In reference to the "self dispersed" teaching, the Examiner has stated that "Wang et al. points to Belmont et al." in an attempt to show the acid functionalized pigment. See Examiner's Answer and Office Action mailed July 25, 2007, page 3. However, Appellants note that Wang never incorporates Belmont by reference. As such, Appellants submit that the Examiner would have to at least combine Wang with Belmont in order to establish a proper combination of elements from each reference. To be clear, Appellants submit that the element of an acid functionalized pigment is missing from Wang and that the Examiner could only establish this element through a combination of references, since Belmont is not incorporated by reference nor does Wang refer to any specific pigment from Belmont that is acid functionalized, which would serve as evidence.

Appellants note that the Examiner has alleged that Wang need not incorporate Belmont by reference in order to maintain the present 102 rejection. However, such a position is in direct conflict with the rejection issued and the case law previously cited for establishing a proper 102 rejection. Specifically, a proper 102 rejection requires that the invention be found in a single prior art reference. Such case law is clear that all the elements must be present in a single reference and such secondary references can only

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serve as evidence. In fact, the Examiner has used such language in the present rejection; rejecting the present claims by Wang in view of evidence in Belmont. However, as previously discussed in Appellants' Appeal Brief, Wang does not contain all the elements. Specifically, there is no disclosure in Wang regarding acid functionalized pigments. Instead, the Examiner is relying on Belmont to provide this entire element. Appellants maintain their position that, at a minimum, the Examiner is combining elements from two references in making the present 102 rejection, which directly conflicts with the present standards for making a proper 102 rejection.

Appellants also stated for the Examiner's information that the Wang reference and the present invention are commonly owned and that the present invention was filed before the publication date of Wang, so Wang is not available for use in a rejection under § 103(a). MPEP 706.02(I)(1). In other words, it appears that the Examiner is maintaining an otherwise § 103 rejection as a § 102 rejection because Wang qualifies as prior art under § 103(c), which essentially means that Wang cannot be used to sustain an obviousness rejection under 103(a).

Appellants further note that even if Wang could be viewed as incorporating the material from Belmont, Wang still does not teach the element of an acid-functionalized pigment. Wang merely suggests the use of "self-dispersed pigments" and not necessarily acid-functionalized pigments as presently claimed. As such, incorporating the material from Belmont would not teach "the identical invention ... in as complete detail" as a presently claimed, as required by Richardson v. Suzuki Motor Co. Specifically, Belmont teaches self-dispersed pigments through the attachment of ionic groups on the pigment surface. However, such an ionic group "may be an anionic group or a cationic group and

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the ionizable group may form an anion or a cation." See col. 5, lines 8-10. As such, Wang does not specifically teach an acid-functionalized pigment in its inks even if one were to consider the teachings of Belmont. Therefore, Wang does not teach the identical invention in as complete detail as required to establish a proper 102 rejection. Further, at a best, this is a situation where a genus teaching is used to reject a species claim (i.e. self-dispersed pigment could be considered a genus of the specific species of an acid-functionalized pigment).

Appellants note that the Examiner has presently addressed this argument in the Advisory Action dated April 9, 2008. Specifically, the Examiner directed Appellants' attention to "column 3, lines 55-65" of Wang, Appellants assume for the purpose of identifying a specific pigment. See Id. page 2. However, Appellants note that Wang is a U.S. Patent Publication and does not contain columns or line numbers; rather pages and paragraph numbers (as commonly associated with U.S. Patent Publications). As such, Appellants cannot determine the passage to which the Examiner is referring. Appellants have searched PAIR for alternative formats of Wang in order to ascertain to the specific passage to which the Examiner has referred, but have been unable to locate any such alternate formatting. Appellants note that the Examiner has not provided any clarification in the Examiner's Answer. Additionally, Appellants have reviewed Wang and reassert that Wang does not teach acid-functionalized pigments; only self-dispersed pigments generally.

Furthermore, Appellants note that the Examiner has not issued a 102(e) rejection by Wang alone, but has maintained the present rejection of Wang as evidenced by Belmont. As discussed above, such a rejection, by its very heading, requires Belmont

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and should be a combination rejection because Wang is clearly missing elements

(Belmont does not merely clarifying existing pigments, but rather is used to allegedly add an acid-functionalized pigment).

Furthermore, there is no disclosure in Wang directed to jettability of inks as related to print head firing frequency. The ink to which independent claim 21 and its dependent claims are directed is reliably jettable at all firing frequencies from 3 kHz to 25 kHz. This characteristic is a <u>limitation</u> of the claims in addition to the listed ink component elements. Therefore, to anticipate these claims, a prior art reference must teach the firing frequency limitation as well.

The Examiner has apparently treated this characteristic as merely an intended result, rather than as an actual limitation. Those having skill in the art can appreciate that reliable jetting across such a wide range of frequencies is not a common characteristic in ink-jet inks. Consequently, one skilled in the art will also recognize that not every formulation based on a combination of components will exhibit the same frequency response. Given a particular combination, one skilled in the art may create a number of formulations having a given frequency response profile, where the response profile is achievable by adjusting relative proportions of the components based upon their individual properties. Similarly, the same approach can be used to arrive at a number of formulations having very different characteristics from the first set. Therefore, for a claim reciting a list of components, ranges of amounts, and frequency response characteristic(s), some combinations of amounts of components will yield inks upon which the frequency response recitation will read, while other combinations will not. In light of this, Appellants have recited the claim element of reliably jettable at all firing

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frequencies ranging from 3 kHz to 25 kHz, and have clearly exemplified how to accomplish this. In other words, the Applicant submits that an ink, falling within the general component parameters as set forth in the present independent claims but that could not be reliably jetted at all firing frequencies ranging from 3 kHz to 25 kHz, would not be covered by the claim. As such, the frequency response characteristic is a limitation on the scope of the claim that alerts one skilled in the art as to the specific formulations that are encompassed by the claim.

The Examiner only responds to the above arguments that Appellants have not demonstrated that such characteristics would not be inherent. Appellants submit that in order to establish a proper 102 rejection through inherency, extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Even if a prior art reference is capable of being modified and the modification would anticipate the invention, this is not sufficient to support an anticipation rejection based on inherency.

As the Examiner is particularly relying on this doctrine, Appellants wish to provide the Board with applicable case law. Specifically, the Federal Circuit Court of Appeals stated "[u]uder the doctrine of inherency, if an element is not expressly disclosed in a prior art reference, the reference will still be deemed to anticipate a subsequent claim if the missing element 'is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill' (citations omitted). Rosco, lnc. v. Mirror Lite Co., 304 F.3d 1373, 1380 (Fed. Cir. 2002). The Court further states that ""[i]nherent anticipation requires that the missing descriptive material is "necessarily present," not merely probably or possibly present, in the prior art" (citations omitted).

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Id. As such, Appellants submit that the appropriate standard in establishing an unticipatory rejection through inherency has been well defined by the courts.

It follows that a disclosure that teaches the components without also explicitly teaching the frequency response characteristic cannot be said to be definitively disclosing that characteristic. At most, there is a mere possibility that the frequency characteristic is present in the disclosed formulations. However, the Federal Circuit has clearly stated that inherency cannot be established by possibilities or probabilities. See, e.g., In re Robertson, 169 F.3d 743, 745 (Fed Cir. 1999). Here, the Wang reference does not teach that the inks disclosed therein are reliably jettable at firing frequencies from 3 kHz to 25 kHz as required by the present claims.

Appellants therefore submit that Wang does not anticipate claim 21 because it fails to disclose every element of the claim. Consequently, Wang also does not anticipate the claims depending from claim 21, in that they each include all of the limitations of claim 21. As such, Appellants respectfully request that the Board overturn the present rejection.

In light of the above, Appellants submit that Wang is not a proper 102 reference as the Examiner has used elements allegedly present in Belmont in support of Wang, and that the present combination fails to teach each and every element of the pending claim set regardless of the improper combination, and therefore, Appellants respectfully request that the Board overturn the present rejection.

P. 16

REPLY BRIEFDocket No. 200315570-1

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# C. Rejection of Claims 1-6, 8-9, and 11-19 over Parazak in view of Zhu and various secondary references

According to M.P.E.P. § 706.02(j), to render a claim *prima facte* obvious, the asserted prior art reference (or references when combined) must teach or suggest all of the claim limitations. Appellants submit that none of the combinations asserted by the Examiner teach or suggest each and every element of claims 1-3, 6, 8, 11-13 (rejected by Parazak in view of Zhu and Suzuki), and 16-18, or subsequent dependent claims 4-5 and 14-15 (rejected by Parazak in view of Zhu and Oikawa further in view of Osumi) and subsequent dependent claims 9 and 19 (rejected by Parazak in view of Zhu and Oikawa and further in view of Ohta).

Each of the independent claims recite that the ink is capable of printing at a frequency along the entire spectrum ranging from 3 kHz to 25 kHz. In rejecting independent claims 1 and 11, the Examiner has used two distinct combinations: Parazak, Zhu and Suzuki; and Parazak, Zhu, and Oikawa. As such, these combinations are discussed below.

The Examiner alleges that the combination of Parazak and Zhu teach all the elements of claims 1 and 11 except for a printhead configured for a specific firing frequency and drop volume. However, the present combination of Parazak and Zhu is improper. Specifically, one skilled in the art would be discouraged from combining Parazak with Zhu since Zhu teaches away from the use of organic solvents as found in Parazak. Even though the Examiner has previously acknowledged that since Zhu "limits the use of solvent to 20%," the Examiner contends that unless such use renders the

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primary reference inoperable, Zhu cannot be said to teach away from Parazak. See
Office Action dated July 25, 2007; page15-16; citing MPEP 2145 III.

However, Appellants contend that such a statement is not in accordance with the current case law regarding "teaching away." Appellants note that the Examiner has now addressed this issue by merely arguing that the ranges of the organic solvent allegedly overlap. However, Appellants submit that such a combination could render the primary reference inoperable based on the teachings of the references as a whole, as Zhu teaches away from the ink composition of Parazak. As Appellants have raised the issue of teaching away and disagreed with the Examiner's interpretation of the doctrine, Appellants would like to review the current case law regarding teaching away for the Board's convenience.

The Court of Appeals for the Federal Circuit has clearly stated that "an applicant may rebut a prima facie case of obviousness by showing that the prior art teaches away from the claimed invention in any material respect." In re Petersen, 315 F.3d 1325, 1331 (Fed. Cir. 2003). The Court has also stated that "[w]e have noted elsewhere, as a 'useful general rule,' that references that teach away cannot serve to create a prima facie case of obviousness," (emphasis added) McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1354 (Fed. Cir. 2001). In identifying the appropriate standard for teaching away, the Court has further stated:

The mere fact that a certain thing may result from a given set of circumstances is not sufficient [to establish inherency.]" In re Oclrich, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981) (citations omitted). "That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown." In re Spormann, 53 C.C.P.A. 1375, 363 F.2d 444, 448, 150 USPQ 449, 452 (CCPA 1966). Such a retrospective view of inherency is not a

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substitute for some teaching or suggestion supporting an obviousness rejection. See In re Newell, 891 F.2d 899, 901, 13 USPQ2d 1248, 1250 (Fed. Cir. 1989).

Clearly in the present case, a person of ordinary skill in the art would be discouraged from following the path set forth in Parazak which teaches the use of up to 50 wt% of organic solvents including low-boiling solvents such as "primary aliphatic alcohols of 30 carbons or less," see col. 4, lines 1-2, based on the teachings of Zhu, since Zhu explicitly states that solvents should be used in small amounts, preferably 1-5 wt%, see col. 9, lines 4-6, and preferably have "high boiling points," see col. 8, lines 47-48.

Furthermore, the Applicant submits that a person skilled in the art, after reviewing each reference in its entirety would be discouraged from combining the elements of the respective compositions since the references set out clearly divergent paths in achieving their ink compositions, as evidenced by the difference in the amounts of organic solvents and types or organic solvents used (as pointed out by the Examiner "the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference... Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art" see Office Action dated July 25, 2007; page 15, quoting In re Keller). As such, the Applicant submits that Zhu teaches away from Parazak since the references set out clearly divergent paths in achieving their ink compositions, and therefore, such a combination cannot be used to establish a prima facie case of obviousness.

Additionally, the Examiner has cited the Suzuki reference to provide the requisite teaching of high-frequency printing. However, Suzuki specifically teaches that

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the high speed printing frequency has an upper limit of about 15 kHz. As such, the combination would have no likelihood of success in producing the system, method, or ink of the present invention. The Examiner has now responded that the drive frequency in Suzuki is "about 15 kHz" and such is within the range of Appellants claimed range. However, such an argument incorrectly presumes that Appellants have merely claimed an ink composition jettable anywhere in the range of 3 to 25 kHz. Such is not the case, as previously discussed, the present claims recite that the ink is capable of printing at a frequency along the entire spectrum ranging from 3 kHz to 25 kHz. Such a claim element is not present in the current combination of references.

Specifically, Appellants submit that Parazak, Zhu, and Suzuki do not teach or disclose an ink that reliably prints across a large range of frequencies, i.e. 3 kHz to 25 kHz. Appellants contend that as Suzuki specifically teaches that the high speed printing frequency has an upper limit of about 15 kHz, Suzuki cannot teach an ink composition recovering the entire range of 3 kHz to 25 kHz as claimed.

In another set of rejections of independent claims 1 and 11, the Examiner has cited Oikawa to provide a teaching of a high-frequency print head. While Oikawa does refer to increasing heater driving frequency to several tens of kHz, the language cited simply refers to a general trend in meeting demand for faster printing without indicating the feasibility of any given frequency range. In fact, the reference goes on to discuss the limitations encountered when increasing frequency, e.g. the growing conflict between control pulse width and firing period eventually lead to ejection failure. See col. 3, lines 7-11. In any event, Oikawa does not remedy the deficiency of Parazak and Zhu with

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regard to teaching an ink that is reliably jettable at all firing frequencies from 3 kHz to 25 kHz.

As Parazak and Zhu combined with either of Oikawa or Suzuki fail to provide each and every element of independent claims 1 and 11, Appellants submit that a *prima* facie case of obviousness against these claims is not supported. Furthermore, the other references eited against the claims depending from these do not remedy the deficiency of Parazak, Zhu, Oikawa, and Suzuki.

In light of the above, Appellants respectfully request that the Board overturn the present rejections. Additionally, for those reasons presented in Appellants' Appeal Brief, Appellants request that the Board overturn the present rejections.

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#### CONCLUSION

Appellants respectfully submit that the claims on appeal set forth in the Appendix of Appellants' Appeal Brief are patentably distinct from the asserted prior art references. Particularly, none of the asserted combinations of references teach each and every element of the claimed invention.

For these reasons, Appellants respectfully request that the Board of Appeals reverse the rejections and remand the case to the Examiner for allowance.

Please charge any fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025.

Dated this 23rd day of September, 2008,

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Gary P. Oakeson Attorney for Appellant Registration No. 44,266

THORPE NORTH & WESTERN, LLP 8180 South 700 East, Suite 350 Sandy, Utah 84070 (801) 566-6633

On Behalf Of: HEWLETT-PACKARD COMPANY Intellectual Property Administration P.O. Box 272400 Fort Collins, Colorado 80528-9599